

FURTHER MAGNETIC OBSERVATIONS IN SOUTH AFRICA
DURING THE YEARS 1913-1915.

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The results* given in this paper were calculated from observations made at different stations in the Orange Free State, Transvaal, and the Cape Provinces. In earlier work in these regions certain parts had not been touched, and it was found difficult to draw the magnetic lines with accuracy until more stations were occupied.

The method of taking the observations has already been fully described in other communications.† The magnetic instruments were magnetometer 73 (Elliott Bros.); dip-circle 142 (Dover). The chronometer employed was No. 1048 (Reed and Son). A 5-in. theodolite, No. 6084 (T. Cooke and Sons), was used for the determination of latitude, longitude, and the azimuth required for the calculation of the magnetic declination.

The reductions have been carried out by Mr. W. H. Finlay, M.A., to whom I again wish to express my thanks for the care he has given to this part of the work.

The values given for the various elements are those obtained from the observations. No correction for secular or daily variation has been introduced, nor has any instrumental correction been employed.

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† "Report of a Magnetic Survey of South Africa," by J. C. Beattie, London, 1909, Appendix, p. 12. "Further Magnetic Observations in South Africa." Transactions of the Royal Society of South Africa, 1914, vol. iv, part 1, p. 11.

SUMMARY OF RESULTS.

Place.	Date.	Latitude.	Longitude.	Declination.	Dip.	Horizontal Intensity.
		S.	E.	W.	S.	
Alexandersfontein .	July 10, 1914	28° 49' 2	24° 46' 0	22° 52' 0	60° 18' 6	·17665
Barkly West .	Jan. 12, 1915	28 33·5	24 32·0	22 31·0	60 17·6	·17643
Bloemhof .	Jan. 15, 1915	27 38·3	25 37·0	22 02·6	59 49·7	·17929
Boshoff .	July 8, 1914	28 32·9	25 14·0	22 48·0	60 03·8	·17758
Bultfontein .	June 28, 1914	28 18·9	26 10·0	21 39·7	60 17·9	·17802
Campbell .	Jan. 26, 1915	28 48·5	23 43·0	23 37·7	60 00·0	·17689
Christiana .	Jan. 14, 1915	27 54·3	25 11·0	22 10·9	59 46·8	·17865
Daniel's Kuil .	Jan. 20, 1915	28 11·1	23 32·0	23 34·2	59 31·2	·17897
Dealesville .	June 29, 1914	28 41·8	25 43·5	22 48·3	60 44·6	·17605
Douglas .	Jan. 28, 1915	29 02·0	23 47·0	23 29·9	60 09·2	·17610
Griquatown .	Jan. 23, 1915	28 53·4	23 14·0	19 35·9	59 43·4	·17555
Jacobsdal .	July 6, 1914	29 08·8	24 46·5	23 09·8	60 17·4	·17599
Jagersfontein .	July 3, 1914	29 45·0	25 31·0	23 00·7	61 00·3	·17373
Klein Boetsap .	Jan. 18, 1915	27 58·6	24 27·0	25 00·4	59 43·5	·17813
Koffyfontein .	July 5, 1914	29 25·2	25 01·0	23 30·5	60 22·2	·17653
Koopmansfontein .	Jan. 19, 1915	28 14·0	24 05·0	22 52·4	59 41·0	·17836
Luckhoff .	July 4, 1914	29 46·0	24 47·0	23 40·7	60 25·9	·17552
Matjesfontein .	June 22, 1914	33 14·2	20 36·0	26 38·9	61 14·0	·17000
Niekerk's Hope .	Jan. 25, 1915	29 20·2	22 50·0	24 52·4	57 52·0	·19588
Paardeberg .	July 7, 1914	29 00·0	25 04·0	23 14·3	60 19·2	·17668
Petrus .	July 9, 1914	29 07·0	25 24·0	23 01·7	60 19·4	·17624
Postmasburg .	Jan. 21, 1915	28 20·8	23 03·5	22 55·9	59 04·2	·18237
Saratoga .	Jan. 29, 1915	29 17·5	23 59·5	23 26·1	60 15·8	·17564
Schmidt's Drift .	Jan. 27, 1915	28 42·1	24 04·0	23 05·0	60 06·0	·17672
Schweizer Reneke .	Jan. 16, 1915	27 11·4	25 19·0	21 33·0	59 34·3	·17899
Taungs .	Jan. 17, 1915	27 34·8	24 45·0	21 46·1	59 43·6	·17825
Witwater .	Jan. 24, 1915	29 04·0	22 50·0	24 06·6	61 09·3	·16906